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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,230	07/13/2001	Naoki Yumiyama	YMOR:214	9837

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STEPTOE & JOHNSON LLP
1330 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT PAPER NUMBER

2656

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/889,230	YUMIYAMA, NAOKI	
	Examiner	Art Unit	
	Jorge L. Ortiz-Criado	2656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1 and 3, each recites the limitation “controlling the spindle motor at an angular velocity lower than a maximum “angular” velocity assigned to CAV control from start of spin-up processing”. Claim also 3 recites the limitation of “changing the first CAV controlled angular velocity to a second CAV controlled angular velocity that is lower than a maximum angular

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velocity of the spindle motor, and sequentially acquiring a LEAD-IN final address, measuring constant linear velocity (CLV) of a recording medium...”

The examiner cannot ascertain/map where in the specification including the detailed description and the drawings these limitations are found. Specifically, the spindle motor is controlled to be CAV with **NO** specific velocity, and from start (step 1 in Fig. 1) of spin-up processing the velocity is NOT lower than maximum velocity, and there is absolutely no mention of any first, second, lower, maximum and/or any change in angular velocity in the disclosure to support the features as claimed and as originally filed. These limitations are considered new matter.

For purpose of examination these limitations are read as to a “constant angular velocity means for controlling a spindle motor from start of spin-up processing of such a disk-shaped recording medium to read standby state”.

Claims 2 and 4 fall together with their respective parent claims.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by “Applicants admitted prior art”.

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Applicants admitted prior art discloses an optical disk reproducing device for reproducing a disk-shaped recording medium on which a recording has been made, comprising:

constant angular velocity (CAV) means for controlling a spindle motor during a period from start of spin-up processing of such a disk-shaped recording medium to a read standby state (see Fig. 2; see Fig. 3, step S5, S6)

Regarding claim 2, Applicants admitted prior art discloses wherein said CAV means for controlling a spindle motor is for controlling the spindle motor when a disk-shaped recording medium rotates at a low speed se page 1, lines 6-16; Fig. 2)

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ishihara et al. U.S. patent No. 5,805,548.

Regarding claim 1, Ishihara et al. discloses an optical disk reproducing device for reproducing a disk-shaped recording medium on which a recording has been made, comprising:

constant angular velocity (CAV) means for controlling a spindle motor at an angular velocity lower tan maximum angular velocity assigned to CAV control from start of spin-up

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processing of such a disk-shaped recording medium to a read standby state (See col. 8, line 30 to col. 9, line 44; col. 10, line 61 to col. 11, line 54; col. 14, lines 43-52; Figs. 1,2,5 and 10)

Regarding claim 2, Ishihara et al. discloses wherein said CAV means for controlling a spindle motor is for controlling the spindle motor when a disk-shaped recording medium rotates at a low speed (See col. 8, line 30 to col. 9, line 44; col. 10, line 61 to col. 11, line 5; col. 14, lines 43-52; Figs. 1,2,5 and 10)

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Theshirogi et al. EP Publication No. 0878795, or by Kubo et al. U.S. Patent No. 5,844,872.

Regarding claim 1, Theshirogi et al. or Kubo et al., each which discloses an optical disk reproducing device for reproducing a disk-shaped recording medium on which a recording has been made, comprising: constant angular velocity (CAV) means (16; 8b, respectively) for controlling a spindle motor from start of spin-up processing of such a disk-shaped recording medium to a read standby state. (See Theshirogi et al. col. 13 ll. 53 to col. 14 ll. 46; Fig. 5; See Kubo et al. col. 11 ll. 25-34, col. 12, ll. 28-42; Fig. 5)

Regarding claim 2, Theshirogi et al. or Kubo et al., each which discloses wherein said CAV means for controlling a spindle motor is for controlling the spindle motor when a disk-shaped recording medium rotates at a low speed (At the starting process; See Theshirogi et al. col. 13 ll. 53 to col. 14 ll. 46; Fig. 5; See Kubo et al. col. 11 ll. 25-34, col. 12, ll. 28-42; Fig. 5))

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 and 4 rejected under 35 U.S.C. 103(a) as being unpatentable over “admitted prior art” in view of U.S. patent No. 5,805,548.

Regarding claim 3, the “admitted the prior art” teaches a method of spin-up processing for reproducing a disk-shaped recording medium on which a recording has been made (See page 2, lines 4-7; see flowchart of Fig. 3), the method comprising:

acquiring a LEAD-IN final address (See page 2, lines 16-18; see Fig. 3 step2 and step 3);

measuring constant linear velocity CLV of a recording medium, (See page 2, lines 18-19; see Fig. 3 step 4) and

setting an angular velocity (CAV) of a disk-shaped recording medium to be slower than maximum rotational speed to perform a predetermined processing (See page 2, lines 23-25; see Fig. 3 step 6);

reading table of contents (TOC) heading from the recording medium (see page 2, lines 26-27, step 7)

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acquiring information for providing data with a high-level function (SUB-Q) (see page 2, lines 28-30, step 8),

performing a READ SET operation (see page 2, lines 31-32, step 9), and

performing HOLD TRACK (See page 2, lines 33-34; see Fig. 3 step 10).

The admitted prior art does teaches controlling a spindle motor by constant angular velocity (CAV) control during spin-up processing to a read standby state, as shown in Fig 3, step 6.

The admitted prior art does not teach controlling a spindle motor by constant angular velocity (CAV) control from start of spin-up processing to a read standby state, the admitted prior art shows controlling using constant linear velocity (CLV) from start of spin-up processing.

However, this feature is well known in the art and is evidenced by Ishihara et al., which discloses an optical disk reproducing device for reproducing a disk-shaped recording medium on which a recording has been made with a constant linear velocity (CLV), comprising constant angular velocity (CAV) means for controlling a spindle motor from start/during of spin-up processing of such a disk-shaped recording medium to a read standby state (See col. 8, line 30 to col. 9, line 44; col. 10, line 61 t col. 11, line 5; col. 14, lines 43-52; Figs. 1,2,5 and 10).

Therefore it would have been obvious to one ordinary with skill in the art at the time of the invention to set the spindle motor to be driven under CAV control and accomplish the spindle motor during process “during a start-up period” from start of the spin-up processing to a read standby state in order to reduce the time period of search/seek operation after, efficiently reproducing the disk in short time, reducing power consumption and further efficiently controlling the transfer rate of the reproduction, as suggested by Ishihara et al.

Regarding claim 4, the combination of “admitted prior art” Ishihara et al. shows wherein setting angular velocity of a disk-shaped recording medium to be slower than a maximum rotational speed comprises setting angular velocity to be half of the maximum rotational speed (See admitted prior art page 2, lines 23-25; see Fig. 3 step 6).

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP Publication No. 07-262692 to Shirane; U.S. patent No. 6,233,110 to Suzuki, each which discloses an optical disk reproducing device for reproducing a disk-shaped recording medium on which a recording has been made, comprising a constant angular velocity means for controlling a spindle motor during a period from start of spin-up processing of such a disk-shaped recording medium to a read standby state.

Response to Arguments

Applicant's arguments filed 09/29/2005 have been fully considered but they are not persuasive.

Applicant's arguments with respect of rejections of the claims under 112 first paragraph.

The Applicants argues that the specification fully supports the limitations of “controlling the spindle motor at an angular velocity lower than a maximum “angular” velocity assigned to CAV control from start of spin-up processing”, as recited in claims 1 and 3, and the limitation of “changing the first CAV controlled angular velocity to a second CAV controlled angular velocity

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that is lower than a maximum angular velocity of the spindle motor, and sequentially acquiring a LEAD-IN final address”

Applicant argues that support is found in the “spin-up processing” on page 5 of the specification.

The examiner respectfully disagrees with the Applicant and cannot concur with the Applicant’s assertions of such support, because the examiner cannot find where, when or how the “spin-up processing on page 5, discloses such limitations. There is absolutely no description mention and/or recitation on page 5 and/or Fig. 1 which is the figure corresponding to the “spin-up processing on page 5, and/or in any other part of the disclosure.

As described on page 5 the spin-up process discloses:

In step S1, setting is made to drive a spindle motor by CAV control (constant angular velocity control) instead of conventional CLV control (constant linear velocity 10 control).

In step S2, servo adjustment is carried out.

In step S3, a LEAD-IN final address is acquired.

In step S4, CLV measurement is carried out.

In step S5, an angular velocity is changed to a half of to a maximum rotational speed (twelve-speed at a maximum of twenty- four- speed).

In step S6, TOC (table of contents) serving as index a information of the disk is read .

In step S7, SUB-Q (additional information for providing, data with a high-level function) less than 00:02.00 is acquired.

In step S8, a HEADER difference is obtained based on the SUB-Q of step 57 and READ SET is carried out.

In step S9, the velocity changed to a half in step S5 is reset and HOLD TRACK is carried out.

As outlined above from the “spin-up processing” of page 5, there is absolutely no “lower angular velocity lower than a maximum angular velocity assigned to CAV control from start.” The only change found is for example in step 5 where an angular velocity is changed to a half of to a maximum rotational speed, and this limitation appear to be the limitation on claim 4, which recites “wherein setting angular velocity of a disk-shaped recording medium to be slower than a maximum rotational speed comprises setting angular velocity to be half of the maximum rotational speed”. However, claim 1 and 3, requires an angular velocity lower than a maximum angular velocity assigned to CAV from start, and this limitation is not found. Furthermore, from step S1 to step S3 step, therein absolutely no change of any first angular velocity to a second angular velocity lower than a maximum angular velocity as to sequentially acquiring a LEAD-IN final address in step S3, as claimed in claim 3.

Applicant also argues that the claims are fully supported because the spin-up processing is recognized in the technical field to include a relatively rapid increase in rotational speed of a storage medium conveys a meaning to persons skilled in the art, as shown in “an article submitted by the applicant “Finding the ideal Disc Drive for 2.5-Inch External USB Applications”, and where initial and final spin-up speeds may vary from device to device, and the may increase in the future, where maximum device speeds may also change over time, shown in an Wikipedia article submitted by the Applicant. Applicants argues that while the claims of

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breath by being silent about any specific initial or final rotational speed, the absence of a numeric example does not render the claim indefinite.

The Examiner respectfully disagrees with the applicant, because first, the question is not whether the claims are indefinite, instead the question is whether the claims are supported by the disclosure as originally filed, as contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, and as to comply with the enablement requirement, as to contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Secondly, whether is known in the art that a “spin-up” processing is a rapid increase in rotational speed of a storage medium, where an initial and final “spin-up speeds may vary from device to device and lower, higher and maximum speeds may be determined in the context of analyzing a specific accused device, these statements are not found to be support for the claimed invention with the claimed language that requires not only the well known “spin-up” process, but also “a constant angular velocity (CAV) for controlling the spindle motor at an angular velocity lower than a maximum “angular” velocity assigned to CAV control from start of spin-up processing”, as recited in claims 1 and 3, and the limitation of “changing the first CAV controlled angular velocity to a second CAV controlled angular velocity that is lower than a maximum angular velocity of the spindle motor, and sequentially acquiring a LEAD-IN final address”. The limitations are considered new matter as outlined above.

Applicant arguments with respect to rejection under 102 and 103 basis.

In regard to claim 1 and 2 Applicant argues that the “admitted prior art” does not use CAV from the start of spin-up process.

As claimed, claim 1 requires an optical disk reproducing device for reproducing a disk-shaped recording medium on which a recording has been made, comprising a constant angular velocity (CAV) means for controlling a spindle motor during a period from start of spin-up processing of such a disk-shaped recording medium to a read standby state.

The applicant’s admitted prior art, discloses an optical disk reproducing device for reproducing a disk-shaped recording medium on which a recording has been made, comprising a constant angular velocity (CAV) means. The examiner cannot find a structural difference between the prior art constant angular velocity (CAV) means and the one claimed, other than that the used as argued by the Applicant. It should be emphasized that “apparatus claims must be structurally distinguishable from the prior art.” MPEP 2114. *In re Danly*, 263 F. 2d 844, 847, 120 USPQ 528, 531 (CCPA 1959) it was held that apparatus claims must be distinguished from prior art in terms of structure rather than function.

Furthermore, in fact Applicant in his admission states, that “the configuration of the hardware is identical to FIG. 2 showing the conventional art”, Page 5, lines 1-3.

In response to applicant's argument that the “admitted prior art” does not use CAV from the start of spin-up process, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably

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distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Applicant argues that fails to see where Ishihara et al. describes CAV control from start of a spin-up. And where Ishihara et al. appears to describe a hardware architecture and a steady-state reading operation under CLV control, in the recited part by the examiner of col. 8, line 30 to col. 9, line 44; col. 10, line 61 to col. 11, line 54; col. 14, lines 43-52; Figs. 1,2,5 and 10.

The Examiner respectfully disagrees and cannot concur with the Applicant, because the examiner does not fails to see what the Applicant fails to see, and what the Applicant believes what Ishihara et al. appears to describes is not what Ishihara et al describe and discloses.

Ishihara et al. clearly discloses and recites for example, in col. 2, lines 59-64, “*an information reading apparatus in which when a disc in which information has been recorded by CLV system is read out by a CAV system*”.

Furthermore, from the portion of col. 8 line 30 to col. 9 line 44, Applicant could see that Ishihara et al. clearly discloses which describes figures 1 and 2, recites “the controller first performs an initial-setting of rotational speed of the spindle motor 4 in Fig. 1, to a default rotational speed”, ... which corresponds to (step S1) in Fig. 2, which clearly recites start up, and previously to step 1, the start. So, the “spin-up” is controlled by CAV control from the very first step 1 of “spin-up” processing, by the CAV system of Ishihara et al. with a default rotational speed. The other portion pointed out by the examiner, each recites the above “spin-up” process

as well, with regard to Figs. 5, and 10, which the same operating steps as those in Fig. 2 are designated by the same reference numerals.

The examiner respectfully submits that all of the passages discloses a “spin-up” process under CAV control from start. And where the examiner can see that the passages describe a CAV control from start of “spin-up”, and not the CLV control argued by the Applicant.

May be the Applicant is confused, with the recitation of Ishihara et al., that states “*a disc in which information has been recorded by CLV system*”, however Ishihara et al. clearly recites that the such recording medium “*is read out by a CAV system*”.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L. Ortiz-Criado whose telephone number is (571) 272-7624. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm), Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Hoa Thi Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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GAUTAM R. PATEL
PRIMARY EXAMINER